

IN THE CLAIMS:

1. (Currently amended) A method in a data processing system for isolating failing hardware in the data processing system, the method comprising:
responsive to detecting a recovery attempt from an error for an operation involving a hardware component, storing an indication of the attempt; and
responsive to [[the]] a number of attempts to recover from the error exceeding a threshold, placing the hardware component in ~~a permanently~~ an unavailable state, wherein the detecting step occurs in a device driver and placing step occurs in a firmware.
2. (Original) The method of claim 1 further comprising:
clearing the unavailable state of the hardware component in response to a hot-plug action replacing the hardware component.
3. (Original) The method of claim 1, wherein the placing step comprises:
making a call to a hardware interface layer to place the hardware component into a permanent reset state.
4. (Original) The method of claim 1, wherein the indication is stored in an error log.
5. (Canceled)
6. (Original) The method of claim 1, wherein the error is an error caused by a PCI bus operation.
7. (Original) The method of claim 1, wherein the detecting and placing steps occur in a firmware layer within the data processing system.
8. (Canceled)

9. (Original) The method of claim 1, wherein the threshold is the error successively a selected number of times.

10. (Currently amended) A method in a data processing system for handling errors, the method comprising:

responsive to an occurrence of an error, determining whether the error is a recoverable error;

responsive to a determination that the error is a recoverable error, identifying at least one slot on a bus indicating an error state;

incrementing an error counter for said at least one identified slot; and

responsive to the error counter indicating a number of attempts to recover from the error exceeding a threshold, placing said at least one slot into an unavailable state, wherein the determining step occurs in a device driver and placing step occurs in a firmware.

11. (Previously presented) The method of claim 10 further comprising:

responsive to the error counter failing to exceed the threshold, placing said at least one slot into an available state, wherein a device within said at least one slot resumes functioning.

12. (Currently amended) A data processing system comprising:

a bus system;

a communications unit connected to the bus system;

a memory connected to the bus system, wherein the memory includes a set of instructions; and

a processing unit connected to the bus system, wherein the processing unit executes the set of instructions to store an indication of a recovery attempt from an error in response to detecting the recovery attempt; and place the hardware component in a ~~permanently an~~ unavailable state in response to [[the]] a number of attempts to recover from the error exceeding a threshold, wherein the detecting step occurs in a device driver and placing step occurs in a firmware.

13. (Currently amended) A data processing system comprising:

a bus system;

a communications unit connected to the bus system;

a memory connected to the bus system, wherein the memory includes a set of instructions; and

a processing unit connected to the bus system, wherein the processing unit executes the set of instructions to determine whether the error is a recoverable error in response to an occurrence of an error; identify at least one slot on the bus indicating an error state in response to a determination that the error is a recoverable error; increment an error counter for said at least one identified slot; and place said at least one slot into an unavailable state in response to the error counter indicating a number of attempts to recover from the error exceeding a threshold, wherein the determining step occurs in a device driver and placing step occurs in a firmware.

14. (Currently amended) A data processing system for isolating failing hardware in the data processing system, the data processing system comprising:

storing means, responsive to detecting a recovery attempt from an error, for storing an indication of the attempt; and

placing means, responsive to [[the]] a number of attempts to recover from the error occurring in the more than a threshold for a hardware component, for placing the hardware component in ~~a permanently~~ an unavailable state, wherein the detecting step occurs in a device driver and placing means occurs in a firmware.

15. (Original) The data processing system of claim 14 further comprising:

clearing means for clearing the unavailable state of the hardware component in response to a hot-plug action replacing the hardware component.

16. (Original) The data processing system of claim 14, wherein the placing means comprises:

means for making a call to a hardware interface layer to place the hardware component into a permanent reset state.

17. (Original) The data processing system of claim 14, wherein the indication is stored in an error log.
18. (Canceled)
19. (Original) The data processing system of claim 14, wherein the error is an error caused by a PCI bus operation.
20. (Original) The data processing system of claim 14, wherein the detecting means and the placing means are located in a firmware layer within the data processing system.
21. (Canceled)
22. (Original) The data processing system of claim 14, wherein the threshold is the error successively a selected number of times.
23. (Currently amended) A data processing system for handling errors, the data processing system comprising:
determining means, responsive to an occurrence of an error, for determining whether the error is a recoverable error;
identifying means, responsive to a determination that the error is a recoverable error, for identifying at least one slot on a bus indicating an error state;
incrementing means for incrementing an error counter for said at least one identified slot; and
placing means, responsive to the error counter indicating a number of attempts to recover from the error exceeding a threshold, for placing said at least one slot into an unavailable state, wherein the determining step occurs in a device driver and placing step occurs in a firmware.
24. (Previously presented) The data processing system of claim 23, wherein the placing means is a first placing means and further comprising:

second placing means, responsive to the error counter failing to exceed the
threshold, for placing said at least one slot into an available state, wherein a device within
said at least one slot resumes functioning.

25. (Currently amended) A computer program product in a computer readable medium for isolating failing hardware in a data processing system, the computer program product comprising:

first instructions, responsive to detecting a recovery attempt from an error, for storing an indication of the attempt; and

second instructions, responsive to [[the]] a number of attempts to recover from the error occurring in the more than a threshold for a hardware component, for placing the hardware component in a ~~permanently~~ an unavailable state, wherein the detecting step occurs in a device driver and placing step occurs in a firmware.

26. (Original) The computer program product of claim 25 further comprising:

third instructions for clearing the unavailable state of the hardware component in response to a hot-plug action replacing the hardware component.

27. (Original) The computer program product of claim 25, wherein the placing step comprises:

third instructions for making a call to a hardware interface layer to place the hardware component into a permanent reset state.

28. (Original) The computer program product of claim 25, wherein the indication is stored in an error log.

29. (Canceled).

30. (Original) The computer program product of claim 25, wherein the error is an error caused by a PCI bus operation.

31. (Original) The computer program product of claim 25, wherein the detecting and placing steps occur in a firmware layer within the data processing system.

32. (Canceled)

33. (Original) The computer program product of claim 25, wherein the threshold is the error successively a selected number of times.

34. (Currently amended) A computer program product in a computer readable medium for handling errors, the computer program product comprising:

first instructions, responsive to an occurrence of an error, for determining whether the error is a recoverable error;

second instructions, responsive to a determination that the error is a recoverable error, for identifying at least one slot on a bus indicating an error state;

third instructions for incrementing an error counter for said at least one identified slot; and

fourth instructions, responsive to the error counter indicating a number of attempts to recover from the error exceeding a threshold, for placing said at least one slot into an unavailable state, wherein the determining step occurs in a device driver and placing step occurs in a firmware.

35. (Previously presented) The computer program product of claim 34 further comprising:

fifth instructions, responsive to the error counter failing to exceed the threshold, for placing said at least one slot into an available state, wherein a device within said at least one slot resumes functioning.